AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method for effectively treating abnormal brain-related conditions by adjusting the central nervous system affecting vagal nerve stimulation (VNS) signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring at least one parameter selected from respiratory parameters and physiological acid-base parameters, ~~changes in parameter values are induced by changes in~~ which correlate to the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to said at least one parameter in order to achieve an optimal stimulation effectiveness with regard to the abnormal brain-related condition to be treated, wherein regulation of said at least one parameter is started in a state where the parameter is at a normal or unchanged level of the patient.

2. (original) A method as claimed in claim 1 wherein said at least one respiratory parameter is selected from a group consisting of end-tidal carbon dioxide ($EtCO_2$), respiratory rate

(RR), respiratory frequency (RF), respiration amplitude (RA), and airflow.

3. (original) A method as claimed in claim 1 wherein said at least one physiological acid-base parameter is selected from a group consisting of CO_2 content and pH.

4. (previously presented) A method for effectively treating abnormal brain-related conditions by adjusting the central nervous system affecting vagal nerve stimulation (VNS) signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring at least one parameter selected from respiratory parameters and physiological acid-base parameters which correlate to the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to said at least one parameter in order to affect the brain, wherein said at least one respiratory parameter is end-tidal carbon dioxide ($EtCO_2$).

5. (original) A method as claimed in claim 2 wherein said at least one respiratory parameter is respiratory frequency (RF).

6. (original) A method as claimed in claim 1 wherein monitoring is performed by a capnograph.

7. (previously presented) A method for adjusting the central nervous system affecting vagal nerve stimulation (VNS)

signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring the level of end-tidal carbon dioxide (EtCO$_2$) and respiration frequency which correlate to the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to the monitored end-tidal carbon dioxide and respiration frequency.

8-13. (canceled)